

Monday, March 24, 2014

Via PDF (Moody.jonathan@EPA.gov)
Confirmation First Class Mail

U.S. Environmental Protection Agency
Attention: Jonathan Moody
Water Enforcement & Compliance Assurance Branch
Water Division, WC-15J
77 West Jackson Blvd.
Chicago, IL 60604-3590

**RE: February 2014 Monthly Discharge Report Pursuant to Paragraph 10 of
July 2, 2013 Clean Water Act Section 308(a) Request for Information
Eagle Mine, LLC, Humboldt Mill Facility
Docket No. V-W-13-308-17**

Dear Mr. Moody:

In accordance with Region 5 U.S. EPA's Clean Water Act Section 308(a) Information Request dated July 2, 2013 (Request) and subsequent correspondence between Regional Counsel Nicole Cantello and Dennis J. Donohue, Eagle Mine LLC (Eagle) hereby submits this monthly report of discharge of water from the Humboldt Tailings Disposal Facility (HTDF) in partial response to paragraph No. 10 of the Request, for the period from February 1 to February 28, 2014.

The enclosed tabular summary (Table 1) contains dates of water discharge from the HTDF, the total estimated volume of discharge and the peak rate of discharge. Because flow rates are measured or estimated on a daily basis, the peak rate of discharge is presented as a daily maximum flow.

Analytical results from February 20, 2014 sampling of the HTDF discharge are also summarized in Table 1. The February 20, 2014 sampling event represents a dry weather sampling event. A qualifying rainfall event did not occur in February of 2014. The laboratory analytical reports for the HTDF discharge samples, including relevant chain of custody documentation, are presented as Attachment I to this letter.

The HTDF discharge analytical results were compared to Michigan Rule 57 water quality standards and no exceedances of Rule 57 water quality standards were observed in the surface water discharge samples.

Finally, we are also submitting surface water elevation data for the HTDF collected in February of 2014, as requested by Nicole Cantello in her September 3, 2013 electronic correspondence to Dennis Donohue.

Please do not hesitate to contact me with any questions regarding these documents or if you are in need of additional information.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Kristen A. Mariuzza
Manager, Environment & Permitting

**HUMBOLDT TAILINGS DISPOSAL FACILITY
STORM WATER DISCHARGE
FLOW DATA**

Discharge Date	Estimated Daily Discharge (gal) ¹	Notes
2/1/2014	1,530,000	
2/2/2014	1,521,400	
2/3/2014	1,541,600	
2/4/2014	1,554,000	
2/5/2014	1,554,000	
2/6/2014	1,588,300	
2/7/2014	1,539,600	
2/8/2014	2,232,000	
2/9/2014	2,232,000	
2/10/2014	2,232,000	
2/11/2014	2,232,000	
2/12/2014	2,232,000	
2/13/2014	2,232,000	
2/14/2014	2,232,000	
2/15/2014	2,232,000	
2/16/2014	2,232,000	
2/17/2014	2,232,000	
2/18/2014	2,232,000	
2/19/2014	2,232,000	
2/20/2014	2,232,000	
2/21/2014	2,232,000	
2/22/2014	2,232,000	
2/23/2014	2,232,000	
2/24/2014	2,232,000	
2/25/2014	2,232,000	
2/26/2014	2,232,000	
2/27/2014	2,232,000	
2/28/2014	2,232,000	
Total Estimated Monthly Discharge (gal):	57,700,900	
Maximum Estimated Daily Discharge Rate (gal):	2,232,000	

¹ Discharge rates are estimated based, in part, on pump capacity and pump operating time.

EPA Section 308(a) Information Request**Docket No. V-W-13-308-17****Eagle Mine, LLC, Humboldt Mill Facility, Champion, MI****Request No. 10****February 2014 Monthly Report**

**HUMBOLDT TAILINGS DISPOSAL FACILITY
STORM WATER DISCHARGE
DISCHARGE CHARACTERIZATION DATA**

Sample Location	EM-HMP-009	
Lab Sample ID	T14B264	
Sampled By	AECOM	
Analyzed By	Trace	
Sample Date	2/20/2014	
<i>Inorganics</i>	<i>Units</i>	
Antimony	ug/L	4.8
Arsenic	ug/L	<1.0
Barium	ug/L	9.7
Beryllium	ug/L	<1.0
Boron	ug/L	48
Cadmium	ug/L	<0.20
Chromium, Total	ug/L	<10
Cobalt	ug/L	3.4
Copper	ug/L	4.6
Lead	ug/L	<1.0
Lithium	ug/L	<10
Manganese	ug/L	190
Mercury (Inorganic)	ng/L	0.6
Molybdenum	ug/L	11
Nickel	ug/L	61
Selenium	ug/L	<1.0
Silver	ug/L	<0.50
Strontium	ug/L	230
Thallium	ug/L	<1.0 J
Zinc	ug/L	<10
<i>Miscellaneous</i>	<i>Units</i>	
Cyanide, total	mg/L	<0.0050
Fluoride	mg/L	0.21
Nitrogen, Ammonia	mg/L	<0.010
Phosphorus, Total	mg/L	<0.010
Sulfate	mg/L	130
Total Dissolved Solids	mg/L	340
Total Suspended Solids	mg/L	<10

Bolded value denotes parameter detected above detection limit

J - The LCS recovery was out of control low. The result and reporting limit for this analyte must be considered estimated.

HUMBOLDT TAILINGS DISPOSAL FACILITY ("HTDF")
SURFACE WATER ELEVATION DATA

Measurement Date	HTDF Water Elevation (ft AMSL)
2/3/2014	1536.31
2/7/2014	1536.12
2/11/2014	1535.76
2/14/2014	1535.53
2/17/2014	1535.29
2/20/2014	1535.05
2/21/2014	1535.01
2/24/2014	1534.73

March 14, 2014

Mr. Lance Lindberg
AECOM
1050 Wilson
Marquette, MI 49855

Phone: (906) 228-2333
Fax: (906) 226-8371

RE: Trace Project T14B264
Client Project Humbolt Mill 60305471

Dear Mr. Lindberg:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

For clients that require NELAC Accreditation, Trace certifies that these test results meet all requirements of the NELAC Standard, except for those analytes with a "N" notation. These analytes have not been evaluated by NELAC at Trace's discretion and will not be reported unless requested by client.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,



Jon Mink
Senior Project Manager
Enclosures



NJDEP Accreditation No. MI008 PADEP Accreditation No. 68-04471

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673
info@trace-labs.com
www.trace-labs.com

SAMPLE SUMMARY

Trace Project ID: T14B264
Client Project ID: Humbolt Mill 60305471

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
T14B264-01	EM-HMP-009	Aqueous	AJP	02/20/14 14:05	02/21/14 10:40

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AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

DEFINITIONS

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
RDL	Reporting Detection Limit
MCL	Maximum Contamination Limit
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the compound has not been evaluated by NELAC
NA	Indicates that the compound is not available.

NOTE: Samples for volatiles that have been extracted with a water miscible solvent were corrected for the total volume of the solvent/water mixture.

DATA QUALIFIERS

Trace ID: T043392-BLK1

Analysis: EPA 200.8 Rev. 5.4

Silver

Note 620 : A positive result for this analyte was found in the method blank. Because no positive result was found in the sample, no data require qualification.

Trace ID: T14B264-01

Analysis: SM 4500-H+ B-00

pH

Note pH : The pH was analyzed at 10:53

Trace ID: T14B264-01RE1

Analysis: EPA 200.8 Rev. 5.4

Thallium

Note 105 : The LCS recovery was out of control low. The result and reporting limit for this analyte, in this quality control batch, must be considered estimated.

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ANALYTICAL RESULTS

Trace Project ID: T14B264
Client Project ID: Humbolt Mill 60305471

Trace ID: T14B264-01 Date Collected: 02/20/14 14:05 Matrix: Aqueous
Sample ID: EM-HMP-009 Date Received: 02/21/14 10:40

PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
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METALS, TOTAL

Analysis Method: EPA 1631E

Batch: T043598

Mercury	0.64 ng/L	0.50	1	03/07/14	rw	03/11/14	klm		
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Analysis Method: EPA 200.7 Rev. 4.4

Batch: T043392

Boron	48 ug/L	40	1	02/26/14	rlb	02/27/14	dtm		
Lithium	<10 ug/L	10	1	02/26/14	rlb	02/27/14	dtm	N	
Strontium	230 ug/L	50	1	02/26/14	rlb	02/27/14	dtm		

Analysis Method: EPA 200.8 Rev. 5.4

Batch: T043547

Antimony	4.8 ug/L	1.0	1	03/06/14	rlb	03/06/14	klm		
Arsenic	<1.0 ug/L	1.0	1	02/26/14	rlb	02/27/14	klm		
Barium	9.7 ug/L	5.0	1	02/26/14	rlb	02/27/14	klm		
Beryllium	<1.0 ug/L	1.0	1	02/26/14	rlb	02/27/14	klm		
Cadmium	<0.20 ug/L	0.20	1	02/26/14	rlb	02/27/14	klm		
Chromium	<10 ug/L	10	1	02/26/14	rlb	02/27/14	klm		
Cobalt	3.4 ug/L	2.0	1	02/26/14	rlb	02/28/14	rw		
Copper	4.6 ug/L	1.0	1	02/26/14	rlb	02/27/14	klm		
Lead	<1.0 ug/L	1.0	1	02/26/14	rlb	02/27/14	klm		
Manganese	190 ug/L	1.0	1	02/26/14	rlb	02/27/14	klm		
Molybdenum	11 ug/L	1.0	1	02/26/14	rlb	02/27/14	klm	N	
Nickel	61 ug/L	5.0	1	02/26/14	rlb	02/27/14	klm		
Selenium	<1.0 ug/L	1.0	1	02/26/14	rlb	02/27/14	klm		
Silver	<0.50 ug/L	0.50	1	02/26/14	rlb	02/27/14	klm		
Thallium	<1.0 ug/L	1.0	1	03/06/14	rlb	03/07/14	zzz	105	
Zinc	<10 ug/L	10	1	02/26/14	rlb	02/27/14	klm		

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ANALYTICAL RESULTS

Trace Project ID: T14B264
Client Project ID: Humbolt Mill 60305471

Trace ID: T14B264-01 Date Collected: 02/20/14 14:05 Matrix: Aqueous
Sample ID: EM-HMP-009 Date Received: 02/21/14 10:40

PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
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WET CHEMISTRY

Analysis Method: ASTM D7511-09e2

Batch: T043327

Cyanide (total)	<0.0050 mg/L	0.0050	1	02/24/14	sv	02/24/14	sv		
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Analysis Method: EPA 300.0 Rev. 2.1

Batch: T043373

Fluoride	0.21 mg/L	0.10	5	02/25/14	sv	02/25/14	sv		
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Sulfate as SO ₄	130 mg/L	5.0	10	02/25/14	sv	02/25/14	sv		
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Analysis Method: EPA 350.1 Rev. 2.0

Batch: T043413

Ammonia as N	<0.010 mg/L	0.010	1	02/27/14	as	02/27/14	as		
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Analysis Method: SM 2540 C-97

Batch: T043375

Total Dissolved Solids	340 mg/L	10	1	02/25/14	sv	02/25/14	sv		
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Analysis Method: SM 2540 D-97

Batch: T043318

Total Suspended Solids	<10 mg/L	10	1	02/21/14	sv	02/24/14	as/sv		
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Analysis Method: SM 4500-H+ B-00

Batch: T043420

pH	7.42 pH Units		1	02/20/14	jrw	02/21/14	jrw	pH	
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Analysis Method: SM 4500-O C-01

Batch: T043308

Dissolved Oxygen	12 mg/L	0.080	1	02/21/14	sv	02/21/14	sv	N	
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Analysis Method: SM 4500-P E

Batch: T043423

Phosphorus-Total (as P)	<0.010 mg/L	0.010	1	02/27/14	sv	02/28/14	rbp	N	
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QUALITY CONTROL RESULTS

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

QC Batch: T043598

Analysis Description: Mercury, Total, Low Level

QC Batch Method: EPA 1631E

Analysis Method: EPA 1631E

METHOD BLANK: T043598-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	ng/L	<0.50	0.50	

LABORATORY CONTROL SAMPLE: T043598-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	ng/L	25.0	26.8	107	77-123	

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

QC Batch: T043392

Analysis Description: Boron, Total

QC Batch Method: EPA 200.2

Analysis Method: EPA 200.7 Rev. 4.4

METHOD BLANK: T043392-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Boron	ug/L	<40	40	
Lithium	ug/L	<10	10	
Strontium	ug/L	<50	50	

LABORATORY CONTROL SAMPLE: T043392-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Boron	ug/L	1600	1490	93	85-115	
Lithium	ug/L	1600	1470	92	85-115	
Strontium	ug/L	1600	1440	90	85-115	

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

QC Batch: T043392

Analysis Description: Cadmium, Total

QC Batch Method: EPA 200.2

Analysis Method: EPA 200.8 Rev. 5.4

METHOD BLANK: T043392-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	ug/L	<0.50	0.50	620
Arsenic	ug/L	<1.0	1.0	

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METHOD BLANK: T043392-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Barium	ug/L	<5.0	5.0	
Beryllium	ug/L	<1.0	1.0	
Cadmium	ug/L	<0.20	0.20	
Cobalt	ug/L	<2.0	2.0	
Chromium	ug/L	<10	10	
Copper	ug/L	<1.0	1.0	
Manganese	ug/L	<1.0	1.0	
Molybdenum	ug/L	<1.0	1.0	
Nickel	ug/L	<5.0	5.0	
Lead	ug/L	<0.40	0.40	
Antimony	ug/L	<1.0	1.0	
Selenium	ug/L	<1.0	1.0	
Thallium	ug/L	<1.0	1.0	
Zinc	ug/L	<4.0	4.0	

LABORATORY CONTROL SAMPLE: T043392-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	ug/L	50.0	46.3	93	85-115	
Arsenic	ug/L	100	100	100	85-115	
Barium	ug/L	1600	1620	101	85-115	
Beryllium	ug/L	200	193	96	85-115	
Cadmium	ug/L	50.0	49.9	100	85-115	
Cobalt	ug/L	1600	1640	102	85-115	
Chromium	ug/L	50.0	51.3	103	85-115	
Copper	ug/L	1600	1620	101	85-115	
Manganese	ug/L	1600	1530	96	85-115	
Molybdenum	ug/L	1600	1560	98	85-115	
Nickel	ug/L	1600	1610	100	85-115	
Lead	ug/L	100	102	102	85-115	
Antimony	ug/L	100	122	122	85-115	
Selenium	ug/L	100	97.3	97	85-115	
Thallium	ug/L	100	81.5	81	85-115	
Zinc	ug/L	1600	1590	99	85-115	

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

QC Batch: T043547

Analysis Description: Antimony, Total

QC Batch Method: EPA 200.2

Analysis Method: EPA 200.8 Rev. 5.4

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METHOD BLANK: T043547-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Antimony	ug/L	<1.0	1.0	
Thallium	ug/L	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T043547-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Antimony	ug/L	100	97.7	98	85-115	
Thallium	ug/L	100	82.0	82	85-115	

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

QC Batch: T043327

Analysis Description: Cyanide, Total

QC Batch Method: ASTM D7511-09e2

Analysis Method: ASTM D7511-09e2

METHOD BLANK: T043327-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Cyanide (total)	mg/L	<0.0050	0.0050	

LABORATORY CONTROL SAMPLE: T043327-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Cyanide (total)	mg/L	0.100	0.102	102	90-110	

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

QC Batch: T043373

Analysis Description: Fluoride

QC Batch Method: IC Prep W

Analysis Method: EPA 300.0 Rev. 2.1

METHOD BLANK: T043373-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Fluoride	mg/L	<0.10	0.10	
Sulfate as SO4	mg/L	<2.5	2.5	

LABORATORY CONTROL SAMPLE: T043373-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Fluoride	mg/L	0.500	0.452	90	90-110	
Sulfate as SO4	mg/L	2.50	2.44	98	90-110	

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

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QC Batch: T043413

Analysis Description: Nitrogen, Ammonia

QC Batch Method: EPA 350.1 Rev. 2.0

Analysis Method: EPA 350.1 Rev. 2.0

METHOD BLANK: T043413-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Ammonia as N	mg/L	<0.010	0.010	

LABORATORY CONTROL SAMPLE: T043413-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Ammonia as N	mg/L	0.500	0.493	99	90-110	

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

QC Batch: T043375

Analysis Description: Total Dissolved Solids

QC Batch Method: SM 2540 C-97

Analysis Method: SM 2540 C-97

METHOD BLANK: T043375-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Dissolved Solids	mg/L	<10	10	

LABORATORY CONTROL SAMPLE: T043375-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Dissolved Solids	mg/L	500	517	103	80-120	

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

QC Batch: T043318

Analysis Description: Total Suspended Solids

QC Batch Method: SM 2540 D-97

Analysis Method: SM 2540 D-97

METHOD BLANK: T043318-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Suspended Solids	mg/L	<10	10	

LABORATORY CONTROL SAMPLE: T043318-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Suspended Solids	mg/L	50.0	46.0	92	85-115	

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

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QC Batch: T043420

Analysis Description: pH, SM 4500

QC Batch Method: *** DEFAULT PREP ***

Analysis Method: SM 4500-H+ B-00

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

QC Batch: T043308

Analysis Description: Dissolved Oxygen

QC Batch Method: SM 4500-O C-01

Analysis Method: SM 4500-O C-01

Trace Project ID: T14B264

Client Project ID: Humbolt Mill 60305471

QC Batch: T043423

Analysis Description: Total Phosphorus

QC Batch Method: SM 4500-P E

Analysis Method: SM 4500-P E

METHOD BLANK: T043423-BLK1

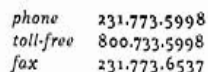
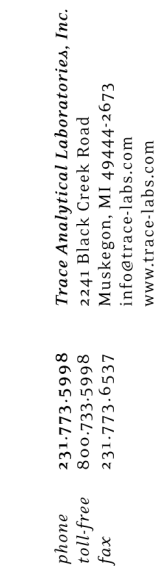
Parameter	Units	Blank Result	Reporting Limit	Notes
Phosphorus-Total (as P)	mg/L	<0.010	0.010	

LABORATORY CONTROL SAMPLE: T043423-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Phosphorus-Total (as P)	mg/L	0.100	0.0957	96	85-116	

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673
www.trace-labs.com

TRACE ID NO.

T14B264

Report Results To:	Client Name: <u>AECOM</u>					Received on ico: <u>Yes</u> No Preservative Checked: <u>Yes</u> No N/A														
	Contact Person: <u>Lance Lindberg</u>					Soil Volatiles Preserved: MeOH Low Level Lab Sampling Time:														
	Mailing Address: <u>1050 Wilson St.</u>																			
	City, State, Zip Code: <u>Marquette, MI 49855</u>																			
Bill To:	Phone: <u>906.226.4980</u>		Fax: <u>906.226.8371</u>			Regulatory Requirements					Turnaround Requirements					Matrix Key				
	Email Address: <u>lance.lindberg@aecom.com</u>					MERA TMDLs <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Drinking Water <input type="checkbox"/> 3-4 Day (RUSH)* <input type="checkbox"/> NPDES <input type="checkbox"/> 24-48 Hour (RUSH)* <input type="checkbox"/> USACE <input type="checkbox"/> * Requires prior approval Special <input type="checkbox"/>					S = Soil W = Water SE = Sediment OI = Oil SO = Solid Waste					WI = Wipes LW = Liquid Waste A = Air D = Drinking Water SL = Sludge				
	Project Name & #: <u>Humboldt Mill / 60305471</u>																			
	Billing Address (if different) <u>same</u>																			
Request for Analytical Services	City, State, Zip Code																			
	Attn:					Phone:					PO #:									
Please Sign	TRACE NO.	DATE TAKEN	TIME TAKEN	VEALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	ANALYSIS REQUESTED	REMARKS	Possible Health Hazard										
Please Sign	Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME										
Please Sign	Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME										

In executing this Chain of Custody, the client acknowledges acceptance of the terms and conditions of the agreement as set forth at <http://www.trace-labs.com/cocterms.php>



the science of compliance

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Muskegon, MI 49444-2673
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www.trace-labs.com

SAMPLE LOG IN CHECKLIST

Trace ID #: <u>714B264</u>	Date: <u>2/21/14</u>	Package Description: <u>COOLIA</u>
Client Name: <u>AECOM</u>	Time: <u>10:40</u>	Logged in by: <u>JW</u>

Cooler Receipt

Cooler/samples delivered by:		Trace courier <input type="checkbox"/>	Name of delivery person: _____	
Hand delivered <input type="checkbox"/>		Commercial courier <input checked="" type="checkbox"/>	UPS <input checked="" type="checkbox"/>	FED EX <input type="checkbox"/> US Mail <input type="checkbox"/>
Tracking Number: <input type="checkbox"/> Not Applicable		Tracking #: <u>1Z RA1 034 01 9718 3153</u>		
COC Seals present and intact on cooler?		No <input type="checkbox"/>	<input type="checkbox"/> Not Applicable	
Yes <input checked="" type="checkbox"/>				
Custody seals signed by Client?		No <input type="checkbox"/>	Client custody seal # (if applicable): _____	
Yes <input checked="" type="checkbox"/>				

Coolant and Temperature

Type of Coolant Used	Cooler Temperature
Slurry w/ crushed, cubed, or chip ice? <input type="checkbox"/>	Correction Factor: IR Thermometer <u>0.2</u> °C
Multiple bags of ice around samples? <input checked="" type="checkbox"/>	Digital Stick Thermometer <u>-0.1</u> °C
Ice Packs/ Blue Ice: <input type="checkbox"/>	Temperature Blank: <u>4.0</u> °C (Use Digital Stick Thermometer)
No Coolant Present: <input type="checkbox"/>	Range of 3 samples: <u>4.2-5.1</u> °C (Use IR Thermometer)
	Melt Water: <u>0</u> °C (IR or Stick Therm. - circle one)
	Ice still present upon receipt: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

General

	Yes	No	NA	Comments
All bottles arrived unbroken with labels in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Each sample point is in a sealed plastic bag?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Labels filled out completely?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
All bottle labels agree with Chain of Custody (COC)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sufficient sample to run tests requested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
pH checked and samples at correct pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Below*
Correct preservative added to samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Air bubbles absent from VOAs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
COC filled out properly and signed by client?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC signed in by TRACE sample custodian?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was project manager called and samples discussed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

*EMD pH Test Strips Used:

☒ pH 0-2.5 Lot: IHC376384 ☐ pH 11.0-13.0 Lot: HC949254
☒ Other: ME16H

Form 70-A.10
Effective 8/26/13

TRACE Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

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